The characteristics of analgesia-withholding in animal-based scientific protocols in Canada\(^2\), found that AW is not prevalent in Canada and recommended:

- Developing research programs to find new methods for pain relief
- Using pilot studies for pain relief where it would ordinarily be withheld because it may interfere with experimental outcomes

Pain relief is often not afforded to animals used in pain research

Chronic pain models often involve surgery for which no pain relief is provided causing pain and inflammation that may not be directly related to the chronic pain that is being studied\(^2\)

This is an area where pilot studies can be conducted to minimize AW

As an example, we investigated whether morphine could be used to treat postoperative pain when studying potential drug treatments for chronic pain?\(^4\)

Methodology

- Animals underwent surgery to generate chronic pain (the spared nerve injury model)\(^4\)
- Mechanical allodynia (pain in response to light touch) was measured to assess chronic pain
- Animals were given the drug propentofylline (PPF), 1 hour preoperatively and daily for 7 days, to see if it could reduce chronic pain
- A second group of animals received morphine, postoperatively and daily for 3 days, as well as PPF to see if morphine interfered with the reduction of chronic pain by PPF

Results

<table>
<thead>
<tr>
<th># of ACCs</th>
<th>Pain</th>
<th>Inflammation</th>
<th>Arthritis</th>
<th>Initiation of GEA</th>
<th>Surgical Procedures</th>
<th>Injury</th>
<th>Neurological</th>
<th>Spared Nerve Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1. Analgesia-Withholding Survey Results

- The survey report, The characteristics of analgesia-withholding in animal-based scientific protocols in Canada\(^2\), found that AW is not prevalent in Canada and recommended:
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Discussion and Conclusion

- Pilot studies, as recommended by the CCAC report, may uncover opportunities for refinement allowing for the minimization of pain and distress wherever possible
- Further research may provide refinement in chronic pain protocols, for example:
  - Postoperative pain relief if long-term pain is the experimental outcome
  - Alternative methods for relief of distress

References


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